

Claims

- [c1] 1. An apparatus for maintaining a liquid level within a receptacle comprising:
- a liquid reservoir adapted to be positioned above a height of a liquid holding basin of the receptacle, the reservoir including an open upper end and a lower end, the open upper end including a threaded, cylindrical outer surface, and the lower end including an reservoir outlet orifice;
 - a cap including an cylindrical wall having an enclosed top end and an open bottom end, the cylindrical wall including a threaded inner surface for engaging with the threaded outer surface of the liquid reservoir;
 - a valve assembly provided approximate the reservoir outlet orifice of the reservoir and operatively coupled to the cap to open the reservoir outlet orifice when the cap is threaded downwardly on the reservoir to a valve-open height below an actuating height and operative to close the reservoir outlet orifice when the cap is threaded upwardly to a valve-closed height on the reservoir above the actuating height; and
 - a circumferential seal provided radially between the reservoir and the cap when the cap is threaded at least

between the valve-open height and the valve-closed height.

- [c2] 2. The apparatus of claim 1, wherein the seal is an o-ring mounted about an outer circumferential surface of the reservoir below the threaded cylindrical outer surface of the reservoir.
- [c3] 3. The apparatus of claim 2, wherein the o-ring is seated within a circumferential groove extending radially inwardly into the outer circumferential surface of the reservoir below the threaded cylindrical outer surface of the reservoir.
- [c4] 4. The apparatus of claim 3, wherein the valve assembly includes a ball-valve.
- [c5] 5. The apparatus of claim 4, wherein the ball-valve includes:
a ball positioned below the reservoir outlet orifice of the reservoir and is biased upwardly against the reservoir outlet orifice to close the reservoir outlet orifice; and
an actuating structure operatively coupled between the cap and the ball, the actuating structure overcoming the bias to push the ball away from the reservoir outlet orifice when the cap is threaded to the valve-open height.
- [c6] 6. The apparatus of claim 5, wherein the actuating struc-

ture includes a rod coupled to an upper end of the ball, extending upwardly through the reservoir outlet orifice and into the reservoir.

- [c7] 7. The apparatus of claim 5, wherein the actuating structure is not attached to the cap so that the cap may be removed from the reservoir leaving the ball to be biased against the reservoir outlet orifice to close the reservoir outlet orifice.
- [c8] 8. The apparatus of claim 5, further comprising a nozzle conduit positioned below the reservoir outlet orifice of the reservoir and containing the ball and bias of the ball-valve therein, the nozzle conduit having a nozzle outlet adapted to be in fluid communication with the receptacle.
- [c9] 9. The apparatus of claim 8, further comprising a hose extending from the nozzle conduit at a first open end and adapted to be extended into the receptacle at an opposing open end.
- [c10] 10. The apparatus of claim 1, wherein the valve assembly includes a ball-valve.
- [c11] 11. The apparatus of claim 10, wherein the ball-valve includes:
a ball positioned below the reservoir outlet orifice of the

reservoir and is biased upwardly against the reservoir outlet orifice to close the reservoir outlet orifice; and an actuating structure operatively coupled between the cap and the ball, the actuating structure overcoming the bias to push the ball away from the reservoir outlet orifice when the cap is threaded to the valve-open height.

- [c12] 12. The apparatus of claim 11, wherein the actuating structure includes a rod coupled to an upper end of the ball, extending upwardly through the reservoir outlet orifice and into the reservoir.
- [c13] 13. The apparatus of claim 11, wherein the actuating structure is not attached to the cap so that the cap may be removed from the reservoir leaving the ball to be biased against the reservoir outlet orifice to close the reservoir outlet orifice.
- [c14] 14. The apparatus of claim 11, further comprising a nozzle conduit positioned below the reservoir outlet orifice of the reservoir and containing the ball and bias of the ball-valve therein, the nozzle conduit having a nozzle outlet adapted to be in fluid communication with the receptacle.
- [c15] 15. The apparatus of claim 14, further comprising a hose extending from the nozzle conduit at a first open end

and adapted to be extended into the receptacle at an opposing open end.

[c16] 16. The apparatus of claim 1, wherein the valve assembly is operative to maintain the reservoir outlet orifice closed when the cap is threaded upwardly beyond the valve-closed height and removed from the reservoir.

[c17] 17. An apparatus for maintaining a liquid level within a receptacle comprising:
a liquid reservoir adapted to be positioned above a height of a liquid holding basin of the receptacle, the reservoir including an open upper end and a lower end, the open upper end including an outer surface, and the lower end including an reservoir outlet orifice;
a cap including an outer wall having an enclosed top end and an open bottom end, the outer wall shaped to engage with the outer surface of the liquid reservoir;
a valve assembly provided approximate the reservoir outlet orifice of the reservoir and operatively coupled to the cap to open the reservoir outlet orifice when the cap is moved downwardly on the reservoir to a valve-open height below an actuating height and operative to close the reservoir outlet orifice when the cap is moved upwardly to a valve-closed height on the reservoir above the actuating height; and
a peripheral seal provided between the outer surface of

the reservoir and an inner surface of the outer wall of the cap when the cap is moved at least between the valve-open height and the valve-closed height.